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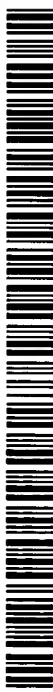
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- (74) Agent: **SANTORO**, Tiziana; Marietti, Gislon e Trupiano
S.r.l., Via Larga, 16, I-20122 Milan (IT).
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- (71) Applicants (*for all designated States except US*): **CON-**
SIGLIO NAZIONALE DELLE RICERCHE [IT/IT];
Piazzale Aldo Moro, 7, I-00185 Roma (IT). **UNIVER-**
SITA' DEGLI STUDI DELL'INSUBRIA [IT/IT]; Via
Ravasi, 2, I-21100 Varese (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **CORAGGIO**,
Immacolata [IT/IT]; c/o Piazzale Aldo Moro, 7, I-00185
Roma (IT). **LOCATELLI**, Franca [IT/IT]; c/o Piazzale
Aldo Moro, 7, I-00185 Roma (IT). **BRACALE**, Marcella
[IT/IT]; c/o Via Ravasi, 2, I-21100 Varese (IT). **VANNINI**,
Candida [IT/IT]; c/o Via Ravasi, 2, I-21100 Varese (IT).
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(54) Title: USE OF SPECIFIC MYB GENES FOR THE PRODUCTION OF TRANSGENIC PLANTS TOLERANT TO BIOTIC AND ABIOTIC STRESSES

(57) Abstract: The present invention relates to the use of Y11414 gene or its functional homologues for the production of plants tolerant to biotic stresses, salt-induced, dehydration-induced, oxidative, osmotic stresses and the use of products which comprise said genes sequences, such as expression cassettes and biological vectors useful in the preparation of transgenic plants.



INTERNATIONAL SEARCH REPORT

Intern Application No
PO 03/02878

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/82 A01H4/00 C07K14/415 C12N15/00 C12N5/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N A01H C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, EMBL, PAJ, WPI Data, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PANDOLFI ET AL.,: "Cloning of a cDNA encoding a novel myb gene (Accession number Y11414) highly expressed in cold-stressed rice coleoptiles" PLANT GENE REGISTER: PGR97-079, 1997, XP002261459	5,6,9-12
Y	-& DATABASE EMBL 'Online! EBI Hinxton, Cambs. UK; 21 April 1997 (1997-04-21), PANDOLFI ET AL.,: "O. sativa mRNA for myb factor" XP002261461 Database accession no. y11414 abstract ----- -/--	1-4,7,8, 13-15

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Roscoe, R

INTERNATIONAL SEARCH REPORT

Intern I Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Osnato M. et al., "Myb4: A rice transcriptional factor involved in cold tolerance". Proceedings of the XLV Italian Society of Agricultural Genetics - SIGA Annual Congress, Salsomaggiore Terme, Italy, 26 September 2001 (2001-09-26) Oral Communication Abstract 'Online! the whole document	1-15
X	US 0 066 120 A (CAHOON ET AL.,) 30 May 2002 (2002-05-30) Seq.ID No.38; p.7-8	5,6,9-12
X	EP 1 033 405 A (CERES INC) 6 September 2000 (2000-09-06) Seq.ID No.69590; Claims 29-30	5,6,9-12
Y	WO 01/032002 A (TONELLI CHIARA ;BASF CORP (US)) 10 May 2001 (2001-05-10) the whole document	1-4,7,8, 13-15
P,X	WO 03/000906 A (PROVART NICOLAS ;SYNGENTA PARTICIPATIONS AG (CH); BRIGGS STEVEN (U) 3 January 2003 (2003-01-03) the whole document	1-15
P,X	WO 03/000898 A (SYNGENTA PARTICIPATIONS AG ;GOFF STEPHEN ARTHUR (US); CHEN WENQION) 3 January 2003 (2003-01-03) the whole document	1-15
A	WINICOV I: "New molecular approaches to improving salt tolerance in crop plants" ANNALS OF BOTANY, ACADEMIC PRESS, LONDON, GB, vol. 82, no. 6, December 1998 (1998-12), pages 705-710, XP001007288 ISSN: 0305-7364	
A	KRANZ H D ET AL: "TOWARDS FUNCTIONAL CHARACTERISATION OF THE MEMBERS OF THE R2R3-MYB GENE FAMILY FROM ARABIDOPSIS THALIANA" PLANT JOURNAL, BLACKWELL SCIENTIFIC PUBLICATIONS, OXFORD, GB, vol. 16, no. 2, 1998, pages 263-276, XP000929447 ISSN: 0960-7412	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 03/02878

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-4 (part), 5, 6, 7-8 (part), 9-12, 13-15 (part)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4(part), 5, 6, 7-8(part), 9-12, 13-15(part)

Use of Y11414 for rendering plants more tolerant to biotic stress by introducing said gene into plant genome.
Y11414 gene and homologs, polypeptide encoded thereby, expression cassettes, vectors, host cells, transgenic plants (all comprising Y11414 and homologs)

2. claims: 1-4, 7-8, 13-15 (all partially)

Use of Y11414 for rendering plants more tolerant to salt-induced stress by introducing said gene into plant genome.

3. claims: 1-4, 7-8, 13-15 (all partially)

Use of Y11414 for rendering plants more tolerant to dehydration-induced stress by introducing said gene into plant genome.

4. claims: 1-4, 7-8, 13-15 (all partially)

Use of Y11414 for rendering plants more tolerant to oxidative stress by introducing said gene into plant genome.

5. claims: 1-4, 7-8, 13-15 (all partially)

Use of Y11414 for rendering plants more tolerant to osmotic stress by introducing said gene into plant genome.

INTERNATIONAL SEARCH REPORT

Intern
PC

1 Application No
03/02878

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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WO 03000906	A	03-01-2003	WO	03000897 A2
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